Abstract Submitted to the
International Conference on Strongly Correlated Electron Systems
University of Michigan, Ann Arbor
August 6-10, 2001

Similar magnetic ordering in UPdSn and CeCuSn

D.R. Noakes[1], G.M. Kalvius[2], H. Nakotte[3], E. Schreier[2], R.W. Wäppling[4]

[1] *Physics Department, Virginia State University, Petersburg, VA 23806*
[2] *Physics Department, E15 Technical University Munich, D-85747 Garching, Germany*
[3] *Physics Department, New Mexico State University, Las Cruces, NM 88003-8001*
[4] *Physics Department, Uppsala University, S-75121 Uppsala, Sweden*

Zero-field muon spin relaxation (μSR) has been measured in a powder sample of UPdSn. Magnetic ordering generates coherent oscillation of the muon polarization at 40K and below. Around the second magnetic transition (nominally 25K) there is an $\sim$4K range of inhomogeneous re-ordering, with the lower-temperature ordered state generating a higher coherent oscillation frequency. In the higher-temperature ordered state, the frequency rises slightly with temperature, contrary to the usual behavior, which is to drop toward zero as T_N is approached, like an order parameter. A similar increase of the coherent oscillation frequency with temperature was observed in μSR of CeCuSn, which has the same crystal structure. This indicates that the same form of magnetic ordering occurs in these two materials. Magnetic Bragg peaks observed in neutron scattering from CeCuSn at low temperature are consistent with the same magnetic structure as in UPdSn, supporting this conclusion.